

**BIRLA INSTITUTE OF TECHNOLOGY, MESRA, RANCHI
(MID SEMESTER EXAMINATION)**

CLASS: BE
BRANCH: EEE/BT/MECH/PROD

SEMESTER: VII
SESSION : MO/2019

SUBJECT : CE7021 ENVIRONMENTAL ENGINEERING

TIME: 1.5 HOURS

FULL MARKS: 25

INSTRUCTIONS:

1. The total marks of the questions are 30.
 2. Candidates may attempt for all 30 marks.
 3. In those cases where the marks obtained exceed 25 marks, the excess will be ignored.
 4. Before attempting the question paper, be sure that you have got the correct question paper.
 5. The missing data, if any, may be assumed suitably.
-

- Q1 (a) Discuss important physical parameters in establishing drinking water quality as per IS: 10500. [2]
(b) Discuss types of water pollutants with example. [3]

- Q2 (a) Discuss formation of chloramines in water supply scheme. [2]
(b) Define chlorination and discuss break-point chlorination with diagram? [3]

- Q3 (a) Discuss physical properties of solid wastes? [2]
(b) Describe how incineration can be used to process Municipal Solid Waste. [3]

- Q4 (a) Discuss Integrated Solid Waste Management (ISWM)? [2]
(b) A typical composting plant is using activated sludge as seeding to improve the C/N ratio. Determine the proportions of yard waste & sludge to achieve a blended C/N ratio of 30 from the given composition. [3]

Component	Yard waste	Sludge
C/N ratio	40	10
Moisture content	60%	80%
Nitrogen content	1%	5%

- Q5 (a) Discuss classification of air pollutants? [2]
(b) Discuss sources and health effects of criteria air pollutants. [3]

- Q6 (a) Explain Arctic ozone depletion. [2]
(b) Explain photochemical smog formation in the atmosphere. [3]

::: 27/09/2019 :::